

IN THE CLAIMS

1 (Currently Amended). A heat pipe comprising:

a tubular body having opposite bottom and top ends, a peripheral wall between said bottom and top ends, and an inner chamber defined by said bottom and top ends and said peripheral wall;

a heat transfer fluid disposed in said inner chamber; and

a heat sink member closing said bottom end and having a bottom face adapted to contact a heat source, said heat sink member further having a top face directed toward said inner chamber, said top face being indented downwardly to define a fluid accumulating portion,

wherein said top face has a central part and a peripheral end surrounding said central part, said top face being indented from said peripheral end to said central part so that said heat sink member decreases in thickness from said peripheral end to said central part,

wherein said fluid accumulating portion of said heat sink member includes a central fluid accumulating cavity and a plurality of channels extending outwardly from said cavity, and

wherein said heat transfer fluid in said fluid accumulating portion absorbs heat from the heat source and vaporizes to carry heat away from the heat source.

2 (Original). The heat pipe as claimed in Claim 1, further comprising:

a cover member covering said top end, said cover member having an inner side facing said inner chamber, an outer side opposite to said inner side, and a filling hole formed in said cover member, in fluid communication with said inner chamber, and extending through said outer side; and

an elastic sealing member fitted within said filling hole,

wherein said elastic sealing member is pierceable to provide a passage for injection of said heat transfer fluid through said elastic sealing member, and is contractible to seal said passage.

Claims 3 and 4 (Canceled).

5 (Currently Amended). The heat pipe as claim in Claim 1 3, wherein said fluid accumulating portion of said heat sink member includes a plurality of spaced-apart downward slots formed in said top face.

6 (Original). The heat pipe as claimed in Claim 1, wherein said peripheral wall of said tubular body has an inner surface formed with a capillary structure.

7 (Original). The heat pipe as claimed in Claim 6, wherein said capillary structure includes a plurality of vertically and radially extending internal wicks.

8 (Original). The heat pipe as claimed in Claim 6, wherein said capillary structure is a metal net connected fixedly to said inner surface of said peripheral wall.

9 (Original). The heat pipe as claimed in Claim 6, wherein said capillary structure includes a plurality of spiral capillary grooves.

10 (New). A heat pipe comprising:
a tubular body having opposite bottom and top ends, a peripheral wall between said bottom and top ends, and an inner chamber defined by said bottom and top ends and said peripheral wall;
a heat transfer fluid disposed in said inner chamber; and
a heat sink member closing said bottom end and having a bottom face adapted to contact a heat source, said heat sink member further having a top face directed toward said inner chamber, said top face being indented downwardly to define a fluid accumulating portion,
wherein said top face has a central part and a peripheral end surrounding said central part, said top face being indented from said peripheral end to said central part so that said heat sink member decreases in thickness from said peripheral end to said central part,
wherein said fluid accumulating portion of said heat sink member includes a plurality of spaced-apart downward slots formed in said top face, and
wherein said heat transfer fluid in said fluid accumulating portion absorbs heat from the heat source and vaporizes to carry heat away from the heat source.

- 11 (New). The heat pipe as claimed in Claim 10, further comprising:
a cover member covering said top end, said cover member having an inner side facing said inner chamber, an outer side opposite to said inner side, and a filling hole formed in said cover member, in fluid communication with said inner chamber, and extending through said outer side; and
an elastic sealing member fitted within said filling hole,
wherein said elastic sealing member is pierceable to provide a passage for injection of said heat transfer fluid through said elastic sealing member, and is contractible to seal said passage.
- 12 (New). The heat pipe as claimed in Claim 10, wherein said peripheral wall of said tubular body has an inner surface formed with a capillary structure.
- 13 (New). The heat pipe as claimed in Claim 11, wherein said capillary structure includes a plurality of vertically and radially extending internal wicks.
- 14 (New). The heat pipe as claimed in Claim 11, wherein said capillary structure is a metal net connected fixedly to said inner surface of said peripheral wall.
- 15 (New). The heat pipe as claimed in Claim 11, wherein said capillary structure includes a plurality of spiral capillary grooves.